

**REMARKS**

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

**I. CLAIM STATUS AND AMENDMENTS**

Claims 34-44, 46-62 and 67-70 were pending in this application when last examined. Claims 46-62 and 67-68 are withdrawn as non-elected subject matter. Claim 34 has been amended, claim 69 has been cancelled, and new claims 71-72 have been added.

Support for the amendments can be found in the specification. Support for claim 34 can be found, for example, at page 8, line 25. Support for claim 71 can be found, for example, at page 5, line 35 to page 6, line 1. Support for claim 72 can be found, for example, at page 8, lines 22-25, and in Figure 1. No new matter has been added.

Claims 34-44, 46-62, 67-68 and 70-72 are pending upon entry of this amendment.

**II. CLAIM REJECTIONS - 35 USC § 112**

At page 2, the Office Action rejects claim 69 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 69 has been canceled, thus rendering moot this rejection. Accordingly, Applicants request reconsideration and withdrawal of the rejection.

### III. CLAIM REJECTIONS - 35 USC § 103

At page 4, the Office Action rejects claims 34-44 and 70 under 35 U.S.C. § 103(a) as obvious over WAGNER (DE 10130186). Applicants respectfully traverse the rejection.

First of all, Applicants respectfully note that the Office Action relies on a translated English language abstract in this rejection. As stated in the MPEP § 706.02(II):

When an abstract is used to support a rejection, the evidence relied upon is the facts contained in the abstract, not additional facts that may be contained in the underlying full text document. Citation of and reliance upon an abstract without citation of and reliance upon the underlying scientific document is generally inappropriate where both the abstract and the underlying document are prior art. See *Ex parte Jones*, 62 USPQ2d 1206, 1208 (Bd. Pat. App. & Inter. 2001) (unpublished).

To determine whether both the abstract and the underlying document are prior art, a copy of the underlying document must be obtained and analyzed. If the document is in a language **other than English** and the examiner seeks to rely on that document, a translation **must be obtained** so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection. (Emphasis added).

In this case, the Office Action has only relied on the English Abstract of WAGNER. Accordingly, Applicants respectfully request that the Examiner provide an English translation of the underlying document, along with specific reasoning and citations to the underlying document, if the Examiner maintains the rejection. In any case, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn, as the claims were improperly

rejected in reliance on the English abstract of the cited foreign document only. Applicants respectfully note that if the Examiner rejects the claims relying on citations to the body of an English translation of the cited foreign document, it would constitute a new rejection as it would be presented for the first time on the record, and therefore cannot be made final.

Regarding the merits of the rejection, claim 34 is directed to a mold for fabricating a silica-based preform that includes an area delimiting a usable portion comprising a liner and a support for the liner. In this area, the liner is sufficiently flexible to accompany the modifications of the dimensions of the piece forming within the mold.

In distinction from claim 34, WAGNER fails to explicitly disclose that the balloon (8) is flexible in the area where the pipe (9) holds the element. The flexible portion of the balloon is clearly outside of the pipe, as shown in Figures 2 and 3, but inside the pipe WAGNER fails to teach or suggest anything regarding the flexibility of the balloon. One of ordinary skill in the art would recognize that balloon flexibility is not required inside of the pipe, and in fact, one might recognize that in order to best connect to the pipe the balloon should be rigid and inflexible.

Furthermore, at this area delimiting the usable portion, the balloon is not in contact with the slurry. Thus,

the balloon cannot "accompany the modification of the dimensions of the piece forming within the mold" as featured in claim 34.

Finally, in WAGNER's device, the shape and integrity of the ceramic article relies on the shape of the balloon and the amount of pressure applied to the balloon. The more that the balloon is inflated the thinner the wall of the ceramic article becomes. WAGNER requires that the balloon be as regular and strong as possible to prevent local distortions that would weaken the ceramic article structure. Accordingly, WAGNER utilizes a balloon that behaves, in its inflated state, like a rigid wall. As stated in WAGNER, the balloon is typically inflated to high pressures, e.g., from 20 to 40 bars. Therefore, the balloon, in its inflated state, is not flexible and cannot "accompany a modification of the dimensions of the piece forming within the mold" even in those areas where the liner is not supported by the pipe.

Instant claim 34 also features a support made of a material rigid enough to support the liner. The support is in contact with the interior face of the liner to prevent the slurry from causing the liner to collapse before the slurry has set, and to guarantee the shape required for the preform.

WAGNER describes a mold that includes an inflatable element (balloon) (8). The Office Action references feature (9) in Figures 2 and 3 of WAGNER and formulates that it "could

be considered a support . . . which appears to be made of a stiff material." The arrangement of features (8) and (9) within the WAGNER mold, however, is not the arrangement set forth in the instantly claimed mold.

For example, the "support" (9) in WAGNER is in fact a pipe. The balloon is fixed to a free end of the pipe and held in place with a holder. A pump mechanism (5 and 6, in Figure 1) is provided to introduce fluid media (e.g. water) through the pipe (9) and into the balloon. The fluid media then inflates the balloon to a pressure, for example, of about 20-40 bar. The pressure applied within the balloon, as well as the timing of the applied pressure, can be regulated in a desired manner. After the ceramic mix solidifies, the balloon is deflated and the pipe with the attached balloon is removed. Therefore, WAGNER utilizes the pipe to position the balloon inside the mold, to provide support to the open end of the balloon, and as a conduit for filling the balloon.

The Office Action recognizes that WAGNER discloses the support for the liner (the pipe) is in contact with the exterior face of the liner, in contrast to present claim 34, which recites that the support is in contact with the interior face of the liner. The Office Action holds that whether the support contacts the exterior or interior face of the liner is not significant as one of ordinary skill in the art could utilize either option. The Office Action fails to recognize,

however, the completely different functions performed by the pipe support in WAGNER and the presently claimed support.

As recited in claim 34, the support of the liner is made of a rigid material and is in contact with the interior face of the liner so as to prevent the slurry from causing the liner to collapse before the slurry has set. As such, the support of the liner could never be arranged in contact with the exterior face of the liner, as taught by WAGNER and as held to be interchangeable in the Office Action. Such an arrangement in contact with the exterior face of the liner would completely destroy a function of the liner to "accompany the modification of the dimensions of the piece forming within the mold" featured in claim 34.

Moreover, as recited in present claim 34, the support is also in contact with the interior face of the liner to guarantee the shape required for the preform. In contrast, the pipe in WAGNER is in contact with a portion of the balloon that does not expand (see, Figures 2 and 3). As such, the pipe in WAGNER does not provide the shape required for the preform. As detailed above, the pipe serves as a means to position the balloon inside the mold and as a conduit for filling the balloon. The pipe connects to the balloon at an open end but does not guarantee the shape required for the preform.

For all of these reasons, WAGNER fails to teach or suggest, and would not have rendered obvious, the mold of

claim 34, and each of claims 35-44 and 70 dependent thereon. Accordingly, Applicants request reconsideration and withdrawal of the rejection.

For additional reasons, claim 70, and new claims 71 and 72 would also have not been obvious in view of WAGNER.

Claim 70 recites that the liner is not stuck to the support, so that the support is removable independently of the liner. In distinction, the balloon in WAGNER is mounted to the pipe and because of the pressure necessary to inflate the balloon, the balloon must be very securely "stuck to the support." WAGNER also discloses that the balloon and the pipe are introduced into, and removed from, the mold cavity together. Thus, WAGNER teaches away from a liner that is not stuck to the support and teaches away from a support that is removable independently of the liner.

Claim 71 recites that in regard to the deformable interior portion, no external pressure is necessary to confer the inherent stiffness. WAGNER fails to teach or suggest a deformable interior portion with such an inherent stiffness.

Claim 72 recites that the liner comprises an adaptable portion that adapts to accompany the modification of the dimensions of the piece forming within the mold, and the support of the liner is in contact with the entire interior face of the adaptable portion of the liner to prevent the slurry from causing the liner to collapse before the slurry

has set and to guarantee the shape required for said preform. As detailed in the above remarks, WAGNER discloses a support (pipe) in contact with the external face of a portion of a liner (balloon). The remainder of the balloon outside of the pipe is flexible (before inflation) and expands under applied pressure. The portion of the balloon in contact with the pipe (i.e., inside the pipe), however, is not an adaptable portion that adapts to accompany the modification of the dimensions of the piece forming within the mold. Furthermore, as shown in Figure 1 of the specification, the support (31) contacts the entire interior face of the liner (30). Thus, WAGNER fails to teach or suggest a support in contact with the entire interior face of the adaptable portion of the liner.

For these additional reasons, WAGNER would not have rendered obvious claim 70, and new claims 71 - 72.

#### **IV. CONCLUSION**

Having addressed all the outstanding issues, the amendment is believed to be fully responsive. Applicants submit that the application is in condition for allowance and respectfully request that a timely Notice of Allowance be issued in this case.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully



requested to contact the undersigned at the telephone number listed below.

The fee of \$52.00 for the extra dependent claim added is being paid online simultaneously herewith by credit card.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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